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EXAMINER

SALTARELLI, DOMINIC D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2611

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                   |                                  |  |
|------------------------------|-----------------------------------|----------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/259,984     | Applicant(s)<br>NISHIKAWA ET AL. |  |
|                              | Examiner<br>Dominic D. Saltarelli | Art Unit<br>2611                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10-27, 32-50 and 52-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-27, 32-50 and 52-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 16, 2005 has been entered.

### ***Response to Arguments***

2. Applicant's arguments, see pages 12-15, filed August 16, 2005, with respect to the rejections of claims 1, 23, and 45 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made in view of Kikinis and Legall.

The claimed limitations found in each independent claim, namely the use of the terms "circuit" in claims 1 and 23, and equivalently the term "element" in claim 45, remain very broad terms that are reasonably interpreted to include any combination and arrangement of computer circuitry, elements, I/O devices, and processors, so long as said combination is capable of the behavior attributed to the claimed circuit or element.

Primarily applicant argues that Kikinis does not teach "a buffer logic circuit...facilitating the transfer of commands and the digital signals between the

circuit that receives wireless television communication signals and the circuit that receives computer network communication signals" (applicant's remarks, page 12, 3<sup>rd</sup> paragraph).

First, the use of URL data as relied upon in the previous action (applicant's remarks, page 12, last paragraph and onto page 13, line 2) is recognized by the examiner as insufficient to meet the claimed limitations in light of applicant's remarks. However, the instant office action interprets the claimed "circuit that receives wireless television communication signals" (claim 1 line 3, equivalently claimed in claim 23 line 3 and claim 45 line 3) to include receiver 65 shown in fig. 1 of Kikinis, which receives command data from a remote control, which is forwarded to the circuit that receives network communication signals in order to control the viewing of content in the system, as the CPU of the set top (CPU 19 in fig. 1 of Kikinis) is an integral and inseparable component in all of the circuit elements, as it is directly responsible for the control of each, thus a command sent to the CPU which causes the CPU to control another element (via sending a command) is an example of sending a command to that element through the CPU.

Second, the existence of buffer memories within the CPU and MPEG decoder which equate to the claimed buffer logic circuit, as described below in the instant office action, are inherent features. Also, the particular use of these inherent buffer memories in the CPU and MPEG decoder make them equivalent to the claimed buffer logic circuit, as the claimed buffer logic is claimed merely to

facilitate communication between the first and second circuits (applicant's remarks, page 14, wherein applicant argues that neither Kikinis nor Legall teach the buffer logic circuit as claimed), or the DSS processing element and the Internet processing element. This language does not limit the circuitry strictly to passing data directly from the first circuit to the buffer, and then directly from the buffer to the second circuit, as the only limitation to be met by the claim is that the buffer "facilitates" the communication of data between the two in any manner.

### ***Claim Objections***

3. Claim 59 is objected to because of the following informalities: On line 1, "claim 60" should be changed to --claim 58--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 10, 11, 16, 17, 19-27, 32, 33, 38, 39, 41-48, 50, and 52-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis (5,929,849, of record) in view of Legall et al. (6,005,565, of record) [Legall].

Regarding claims 1, 20, 21, 23, 42, and 43, Kikinis discloses an apparatus and corresponding method for displaying information on a television comprising:

a circuit that receives wireless television communication signals (fig. 1, decoder/tuner 13 and receiver 65, under control of CPU 19) from a satellite (via link 15, col. 5, lines 34-41), the wireless television signals including sensory [broadcasts] and programming data related to the sensory data and provides signals comprising sensory data and programming data (both broadcast data, such as commercials, are sent with additional related URL data, col. 6, lines 33-63)

a circuit that receives computer network communication signals (fig. 1, ISDN interface 39, modem 35, VGA chipset 33, under control of CPU 19) from the Internet (col. 5, lines 56-67)

a buffer logic circuit (fig. 1, CPU 19 and MPEG decoder 25, wherein MPEG decoders and 80486 processors inherently include buffer memories. In the 80486 microprocessor, the inherent buffer memory is referred to as the L1 cache, which stores command words for execution by the processor. In MPEG decoders, buffer memory is inherently necessary, because MPEG decoding does not occur at a constant rate, as I frames, which include the most amount of information, take longer to decode than subsequent P and B frames, which contain less data and therefore decode more quickly, thus necessitating the need for a buffer to accommodate for the variable rate of decoding) that receives the digital signals (video data is delivered via link 29, col. 5, lines 49-55) and

Art Unit: 2611

facilitates communication (the CPU 19 coordinates the system and controls the flow of video information to the VGA chipset and URL data to the modem, col. 5, lines 34-41, 49-55, and col. 6, lines 1-12, and col. 7, lines 57-67) is coupled with both the circuit (13, 65) that receives wireless television communication signals and the circuit (33, 35, 39) that receives computer network communication signals, wherein the buffer logic circuit (19, 25) that facilitates communication facilitates communication between the circuit (13, 65) that receives wireless television communication signals and the circuit (33, 35, 39) that receives computer network communication signals, including facilitating the transfer of commands (user input commands used to control the system, such as input that initiates the retrieval of data from the internet, col. 7, lines 57-67 and subsequent manipulations of such, col. 8, lines 22, pass from receiver 65 to modem 35 or 39 after appropriate processing by CPU 19) and the digital signals (video data received through decoder/tuner 13 is buffered first in the MPEG decoder 25 then transported to the VGA chipset 33, col. 5, lines 42-55 and the URL data received through decoder/tuner 13 passes first through the CPU 19 before being sent to modem 35 or 39 or retrieval of internet data, col. 7, lines 57-67) between the circuit (13, 65) the receives wireless television communication signals and the circuit (33, 35, 39) that receives computer network communication signals;

a circuit that displays the received wireless television communication signals and the received computer network communication signals on the television (fig. 1, VGA circuitry 33, col. 6, lines 24-32).

Kikinis fails to disclose a circuit that displays an option palette on the television, the option palette having a plurality of icons that facilitate a user's navigation through the received wireless television communication signals.

In an analogous art, Legall teaches a circuit (fig. 1, processor system 100) that displays an option palette [tool area] (Figure 2, left hand column of icons) (col. 2, lines 44-47) on a television, the option palette having a plurality of icons that facilitate a user's navigation through the received wireless television communication signals (such as the 'Attractions' and 'EPG' icons), for the benefit of greatly increased interactivity to a user in an interactive television environment (col. 2, lines 26-59).

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus and method disclosed by Kikinis to include a circuit that displays an option palette on the television, the option palette having a plurality of icons that facilitate a user's navigation through the received wireless television communication signals, as taught by Legall, for the benefit of greatly increasing the interactivity options to a user in the interactive television system.

Regarding claims 2, 3, 5, 24, 25, and 27, Legall additionally discloses a circuit that displays a plurality of filtering options (fig. 3B, search window 375) (col. 3, lines 11-13) on the television, each filtering option representing a way in which the programming data in the received wireless television communication signals is displayed on the television (col. 3, lines 13-19), and the filtering options



[power search tool] are displayed by selecting an icon in the option palette [tool area] (col. 2, lines 44-47). These filtering options can comprise a category, such as sports and drama, associated with the programming data (col. 4, lines 3-8), for increased flexibility in retrieval of desired information (col. 1, lines 30-43).

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus and method disclosed by Kikinis and Legall to include a circuit that displays a plurality of filtering options on the television, each filtering option representing a way in which the programming data in the received wireless television communication signals is displayed on the television, and the filtering options are displayed by selecting an icon in the option palette, comprising a category, such as sports and drama, associated with the programming data, as taught by Legall, for the benefit of increased flexibility to a user when retrieving desired information, allowing a user to perform independent searches in addition to provided information.

Regarding claims 4 and 26, Kikinis and Legall disclose the apparatus and corresponding method of claims 3 and 25, and further disclose the filtering categories to be movies (Legall, drama category represents movies, col. 4, lines 5-8).

Regarding claims 10, 11, 32, and 33, Legall additionally discloses filtering the programming data by a predetermined time period associated with the

programming data (Figure 3B, items 351 and 352, col. 3, lines 39-42) in response to the user selecting a filtering option (col. 3, lines 43-45). This predetermined time period is shown in Figure 3B to be an hour. These options provide enhanced flexibility to a user for controlling the display of information according to user preferences.

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus and method disclosed by Kikinis and Legall to include filtering the programming data by a predetermined time period (one hour) associated with the programming data in response to the user selecting a filtering option, as taught by Legall, for the benefit of increased flexibility to a user for controlling the display of available information according to the express preference of the user.

Regarding claims 16, 17, 38, and 39, Legall additionally discloses an on-screen search window (Figure 3B, search window 375) (col. 3, lines 11-13) on the television, the on screen search window for displaying a search command entered by the user (340) (col. 3, lines 28-31), a remote keyboard (115) (col. 2 lines 26-28) in communication with the on-screen search window circuit such that the user can enter the search command in the on-screen search window via the remote keyboard (col. 3, lines 28-31), and a circuit (306) for searching the programming data in accordance with and in response to the entered search

command (col. 3, lines 11-17) for increased flexibility in retrieval of desired information (col. 1, lines 30-43).

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus and method disclosed by Kikinis and Legall to include an on-screen search window on the television, the on screen search window for displaying a search command entered by the user, a remote keyboard in communication with the on-screen search window circuit such that the user can enter the search command in the on-screen search window via the remote keyboard, and a circuit for searching the programming data in accordance with and in response to the entered search command, as taught by Legall, for the benefit of increased flexibility to a user when retrieving desired information, allowing a user to perform independent searches in addition to provided information.

Regarding claims 19 and 41, Legall additionally discloses a circuit that filters the programming data of the wireless television communication signals by channel and a circuit that displays a plurality of channels of programming data on the television (220) (col. 2, lines 40-47), and a circuit that permits the user to select a number of channels displayed on the television (col. 2, lines 57-59) in response to the user selecting an icon in the option palette (EPG icon from left hand column in Figure 2), for the benefit of providing to users programming data

in the form of a program guide, which are intuitive displays which allow users to browse programming information and select desired programs for display.

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus and method disclosed by Kikinis and Legall to include a circuit that filters the programming data of the wireless television communication signals by channel and a circuit that displays a plurality of channels of programming data on the television, and a circuit that permits the user to select a number of channels displayed on the television in response to the user selecting an icon in the option palette, as taught by Legall, for the benefit of providing to users programming data in the form of a program guide, which are intuitive and well known displays which allow users to browse programming information and select desired programs for display.

Regarding claims 22 and 44, Kikinis and Legall disclose the apparatus and corresponding method of claims 1 and 23, and Kikinis further discloses a remote controller (63) for facilitating a user's selection of an icon (remote control is used for user actuation of desired items on screen, col. 7, lines 57-67).

Regarding claim 45, Kikinis discloses a DSS processing element (fig. 1, decoder/tuner 13, MPEG decoder 25, VGA chipset 33, and receiver 65, under control of CPU 19) communicatively connected to at least one satellite communication channel (fig. 1, satellite receiver 15) for receiving digital

communication signals (col. 5, lines 34-41 and col. 6, lines 33-49), the received digital communication signals including sensory data (frame data) and programming data related to the sensory data (URL data), the DSS processing element converting the received digital communication signals into a form that can be displayed on the television (col. 5, lines 34-55),

an Internet processing element (fig. 1, modem 35, and ISDN 39, TV 51, and computer monitor 53, under control of CPU 19) communicatively connected to the Internet (col. 5, lines 56-67) for receiving computer network communication signals and converting the received computer network communication signals into a form that can be displayed on the television (via the web browser, col. 6, lines 1-12), the Internet processing element receiving the converted digital communication signals from the DSS processing element (from VGA chipset 33) and displaying the converted digital communication signals and the converted computer network communication signals (col. 5, lines 49-55); and

buffer logic comprising at least one buffer (fig. 1, CPU 19 and MPEG decoder 25, wherein MPEG decoders and 80486 processors inherently include buffer memories. In the 80486 microprocessor, the inherent buffer memory is referred to as the L1 cache, which stores command words for execution by the processor. In MPEG decoders, buffer memory is inherently necessary, because MPEG decoding does not occur at a constant rate, as I frames, which include the most amount of information, take longer to decode than subsequent P and B frames, which contain less data and therefore decode more quickly, thus

Art Unit: 2611

necessitating the need for a buffer to accommodate for the variable rate of decoding), the buffer logic is coupled with the DSS processing element (13, 19, 25, 33, 65) and the Internet processing element (19, 35, 39, 51, 53), wherein the buffer logic buffers and facilitates communication between the DSS processing element (13, 19, 25, 33, 65) and the Internet processing element (19, 33, 35, 39), including buffering and facilitating the transfer of commands (user input commands used to control the system, such as input that initiates the retrieval of data from the internet, col. 7, lines 57-67 and subsequent manipulations of such, col. 8, lines 22, pass from receiver 65 to modem 35 or 39 after appropriate processing by CPU 19) and the digital signals (video data received through decoder/tuner 13 is buffered first in the MPEG decoder 25 before passing through the VGA chipset 33 to the display devices 51 and 53, col. 5, lines 42-55, and the URL data received through decoder/tuner 13 passes first through the CPU 19 before being sent to modem 35 or 39 for retrieval of internet data, col. 7, lines 57-67) between the DSS processing element (13, 19, 25, 33, 65) and the Internet processing element (19, 35, 39, 51, 53).

Kikinis fails to disclose the DSS processing element generates an option palette that is delivered to the Internet processing element and can be displayed on the television, the option palette having a plurality of icons that facilitate a user's navigation through the converted digital communication signals.

In an analogous art, Legall teaches generating an option palette [tool area] (Figure 2, left hand column of icons) (col. 2, lines 44-47) for display on a

television, the option palette having a plurality of icons that facilitate a user's navigation through received wireless television communication signals (such as the 'Attractions' and 'EPG' icons), for the benefit of greatly increased interactivity to a user in an interactive television environment (col. 2, lines 26-59).

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus disclosed by Kikinis to include an option palette for display on the television, the option palette having a plurality of icons that facilitate a user's navigation through the received wireless television communication signals, as taught by Legall, for the benefit of greatly increasing the interactivity options to a user in the interactive television system.

Regarding claims 46 and 47, Legall additionally discloses a plurality of filtering options [power search tool] (col. 4, lines 3-7) displayed in response to the user selecting an icon in the option palette [tool area] (col. 2, lines 43-47), each filtering option representing a way in which the programming data in the converted digital communication signals are displayed on the television, wherein a filtering option is filtering the programming data by a category associated with the programming data, enabling a user to quickly narrow displayed information to match particular criteria (col. 3, lines 57-60).

It would have been obvious at the time to further modify the apparatus of Kikinis and Legall to have the same DSS processing element which generates the option palette to also generate a plurality of filtering options in response to

the user selecting an icon in the option palette, where each filtering option represents a way in which the programming data in the converted digital communication signals are displayed on the television, wherein a filtering option is filtering the programming data by a category associated with the programming data, and to have the Internet processing element receive the plurality of generated filtering options from the DSS processing element and display the plurality of generated filtering options on the television as further taught by Legall, for the benefit of providing instantly accessible search [filtering] options that are selectable, instead of having a user enter or re-enter them manually each time.

Regarding claim 48, Legall additionally discloses the filtering the programming data by a predetermined time period associated with the programming data (Figure 3B, items 351 and 352, col. 3, lines 39-42) as an additional feature of the power search tool, enhancing its capability and flexibility.

It would have been obvious at the time to further modify the apparatus of Kikinis and Legall to provide a filtering option that filters the programming data by a predetermined time period as taught by Legall. The reason for doing so is enhanced flexibility.

Regarding claim 50, the modified apparatus of Kikinis and Legall includes a remote controller (Kikinis, fig. 1, remote control 63) for enabling a user to select



an icon from the plurality of icons of the option palette (remote control is used for user actuation of desired items on screen, col. 7, lines 57-67).

Regarding claim 52, Kikinis and Legall disclose the apparatus of claim 45, wherein the buffer logic further receives broadcast data and forwards the broadcast data to the Internet processing element (Kikinis teaches broadcast data is received as digital communications, col. 6, lines 33-49, and in order to separate the associated URL data, col. 6 line 50 – col. 7 line 9, the broadcast data is buffered in the buffer logic [19, 25] to perform said processing and then directed toward the Internet processing element [19, 33, 35, 39] for display).

Regarding claims 53 and 55, Kikinis and Legall disclose the apparatus and corresponding method of claims 1 and 23, and Kikinis discloses the circuit that receives the digital signals and facilitates communication (19, 25) receives broadcast data (from 13) and forwards the broadcast data to the circuit that receives computer network communication signals (33, 35, 39) and displays it on the television (col. 6, lines 24-32).

Regarding claim 54, Kikinis and Legall disclose the apparatus of claim 1, and Kikinis discloses the circuit that receives the digital signals and facilitates communication (19, 25) further receives commands from a user (from remote control 63) and forwards the received commands to the circuit that receives

computer network communication signals (the command to retrieve a URL is forwarded to the modem, which retrieves the URL for display in the WWW browser, col. 7, lines 57-67).

Regarding claim 56, Legall additionally discloses decimating programming data (fig. 2, area 205, col. 2, lines 40-42) and blending the decimated portion of the programming data with computer network communication signals (col. 2, lines 38-47), creating an interactive space that allows a user to observe unobstructed programming in the decimated region while also interacting with the retrieved computer network data.

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Kikinis and Legall to include decimating programming data and blending the decimated portion of the programming data with computer network communication signals, as taught by Legall, for the benefit of creating an interactive space that allows a user to observe unobstructed programming in the decimated region while also interacting with the retrieved computer network data for a more efficient and comprehensive presentation to the user.

Regarding claim 57, Kikinis and Legall disclose the apparatus of claim 1, wherein the option palette comprises a planner screen that displays a calendar

Art Unit: 2611

indicating programs that are selected (Legall, the EPG that shows a selected program, namely "Jumanji", as shown in fig. 2).

Regarding claims 58 and 59, Kikinis and Legall disclose the apparatus of claim 1, wherein the buffer logic circuit further comprises a multiplexer coupled with a plurality of buffers such that the multiplexer receives data including the programming data from the circuit that receives wireless television communication signals that is forwarded to the buffers and an address decoder coupled with the multiplexer to deliver an address dictating which of the plurality of buffers portions of the data received from the circuit that receives wireless television communication signals is to be communicated (these are inherent features of the system disclosed by Kikinis, as shown in figs. 1 and 2B, and described in col. 7, lines 18-67, wherein two distinct types of data are received by the decoder/tuner 13, frame data 61 and 65 shown in fig. 2B, and data region 63, wherein the frame data would be necessarily be recognized by an address decoder as frame data, which would direct a multiplexer to route the identified frame data to the input buffer memory of the MPEG decoder 25, while the data in data region 63 is meant for CPU 19 and is thus recognized as control type data by the address decoder and routed by the multiplexer to the input buffer memory of CPU 19 for processing).

Art Unit: 2611

6. Claims 18 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis and Legall in view of Maekawa et al. (5,081,628, of record), [Maekawa].

Regarding claims 18, and 40, Kikinis and Legall disclose the apparatus and corresponding method of claims 16 and 38, but fail to specifically disclose the user input device to be a wireless keyboard.

Maekawa discloses a wireless keyboard (3) used in conjunction with a display device (1) and serves to eliminate cable that occupies space and impairs appearance (col. 1, lines 19-21 and col. 1, lines 42-43).

It would have been obvious at the time to modify the apparatus and corresponding method of Kikinis and Legall to make the user input device a wireless keyboard as taught by Maekawa. The reason for doing so would be to eliminate cable that occupies space and impairs appearance.

7. Claims 12, 13, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis and Legall in view of Schultheiss (6,208,384, of record).

Regarding claims 12, 13, 34, and 35, Kikinis and Legall disclose the apparatus and corresponding method of claims 10 and 32, but fail to disclose the filtering option of filtering the programming data by a predetermined time period associated with the programming data is time period being a day or month.

Schultheiss discloses software (col. 8, lines 48-51) which can display TV listings [programming data] which is viewer customizable (col. 8, lines 60-65),

most notably regarding how many days of listings to display, allowing viewer customization of the EPG according to interest.

It would have been obvious at the time to modify the apparatus and corresponding method of Kikinis and Legall to provide a filtering option that filters the programming data by a predetermined time period of a day or month as taught by Schultheiss. The filtering option taught by Schultheiss is an open-ended form of customization, and thus the reason for doing so would be to provide further customization of displayed programming data (EPG) according to viewer interest.

8. Claims 14, 15, 36, 37, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis and Legall as applied to claims 1, 23, and 45 above, and further in view of Maze et al. (6,216,264, of record) [Maze].

Regarding claim 14, 15, 36, and 37, Kikinis and Legall disclose the apparatus and corresponding method of claims 1 and 23, and

Legall additionally discloses a circuit for entering a search command in response to the user selecting the keys of a keyboard (Figure 3B, text field 340) and a circuit (fig. 3A, search engine 306) for searching the programming data in accordance with and in response to the entered search command (col. 3, lines 11-17), allowing a user to perform independent searches based on criteria expressly entered by the user.

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus and method disclosed by Kikinis and Legall to include a circuit for entering a search command in response to the user selecting the keys of a keyboard and a circuit for searching the programming data in accordance with and in response to the entered search command, as taught by Legall, for the benefit of increased flexibility to a user when retrieving desired information, allowing a user to perform independent searches in addition to provided information

Kikinis and Legall fail to disclose a circuit for displaying an on-screen keyboard.

Maze discloses a circuit for displaying an on-screen keyboard (Figure 6) and a remote controller for (450R) which enables a user to select the keys of the on-screen keyboard (col. 5, lines 17-25), so that only a remote control is required for entering text searches in a quick and recognizable fashion.

It would have been obvious at the time to modify the apparatus and corresponding method disclosed by Kikinis and Legall to include a circuit for displaying an on-screen keyboard for entering a search command through the use of a remote controller as taught by Maze. The reason for doing so would be so that only a remote control is required for entering text searches in a quick and recognizable fashion.

Regarding claim 49, the modified apparatus of Kikinis and Legall disclose the apparatus of claim 45 as applied above, but fail to disclose the DSS processing element searches the programming data in the converted digital communication signals for information associated with an entered search command.

Legall additionally discloses an element that searches the programming data in the converted digital communication signals for information associated with an entered search command (col. 3, lines 11-27) for increased flexibility in retrieval of desired information (col. 1, lines 30-43).

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus of Kikinis and Legall to include searching the programming data in the converted digital communication signals for information associated with an entered search command, as taught by Legall, for the benefit of increased flexibility to a user when retrieving desired information, allowing a user to perform independent searches in addition to provided information.

Kikinis and Legall fail to disclose the means by which said search command is entered is an on-screen keyboard.

Maze discloses a circuit for displaying an on-screen keyboard (Figure 6) for entering text searches in a quick and recognizable fashion.

It would have been obvious at the time to modify the modified apparatus disclosed by Kikinis and Legall to further comprise an on-screen keyboard as taught by Maze for entering text searches in a quick and recognizable fashion.

### ***Conclusion***

9. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.



Art Unit: 2611

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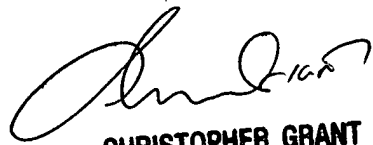
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic D. Saltarelli whose telephone number is (571) 272-7302. The examiner can normally be reached on Monday - Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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